CLAIMS:

1. A method of processing seismic data, the method comprising:

a) identifying the value of a first parameter associated with an event in a first set of seismic data;

b) obtaining, using at least one look-up table, the value of a second parameter, the second parameter being associated with a corresponding event in a second set of seismic data.

2. A method as claimed in claim 1 and comprising obtaining the value of the second parameter using a first look-up table of the first parameter against at least one survey parameter and a second look-up table of the second parameter against the at least one survey parameter.

3. A method as claimed in claim 2 wherein step (b) comprises:

b1) obtaining, using the first look-up table, the value of the survey parameter, or a respective value of each survey parameter, corresponding to the value of the first parameter associated with the event in the first set of seismic data; and

b2) obtaining, using the second look-up table, the value of the second parameter corresponding to the value of the survey parameter, or the respective values of each survey parameter, determined in step (b1).

4. A method as claimed in claim 1, 2 or 3 and further comprising defining a third look-up table of a third parameter against the at least one survey parameter.

5. A method as claimed in claim 4 when dependent from claim 3 and further comprising obtaining, using the third look-up table, the value of the third parameter corresponding to the value of the survey parameter, or the respective values of each survey parameter, determined in step (b1).

6. A method as claimed in claim 2, 3, 4 or 5, wherein the at least one survey parameter comprises offset and interface index.

7. A method as claimed in any preceding claim wherein the first parameter is PP travel time.

8. A method as claimed in claim 7 wherein the second parameter is PS travel time.

9. A method as claimed in claim 7 or 8, when dependent directly or indirectly from claim 4, wherein the third parameter comprises reflection depth.

10. A method as claimed in any of claims 1 to 6 wherein the first parameter of the seismic data is reflection depth.

11. A method as claimed in any preceding claim and comprising displaying the obtained value of the second parameter.

12. A method as claimed in claim 5, or in any of claims 6 to 11 when dependent directly or indirectly from claim 5, and comprising displaying the obtained value of the third parameter.

13. A method as claimed in claim 11 or 12 wherein the displaying step comprises highlighting a portion of a displayed seismic trace.

14. A method as claimed in any preceding claim and comprising modifying the look-up table, or modifying at least one look-up table, on the basis of the obtained value of the second parameter.

15. A method as claimed in claim 5, or in any of claims 6 to 14 when dependent directly or indirectly from claim 5, and comprising modifying the look-up table, or modifying at least one look-up table, on the basis of the obtained value of the third parameter.

16. A method as claimed in claim 14 or 15 wherein the step of modifying the look-up table, or modifying at least one look-up table, comprises modifying a model for the velocity of propagation of acoustic energy within the earth.

17. A method of processing seismic data comprising:

determining a first look-up table of a first parameter of seismic data against at least one survey parameter; and

determining a second look-up table of a second parameter of seismic data against the at least one survey parameter;

wherein the method comprises using a predetermined model for the velocity of propagation of seismic energy within the earth in the determination of the first and second look-up tables.

18. An apparatus for processing seismic data, comprising:

means for identifying the value of a first parameter associated with an event in a set of seismic data; and

means obtaining, using first and second look-up tables, the value of a second parameter, the second parameter being associated with another event in the set of seismic data.

19. An apparatus as claimed in claim 18 and comprising a programmable data processor.

20. A storage medium containing a program for the data processor of an apparatus as defined in claim 19.

21. A storage medium containing a program for controlling a programmable data processor to carry out a method as defined in any of claims 1 to 17.

22. A program for controlling a computer to carry out a method as defined in any of claims 1 to 17.